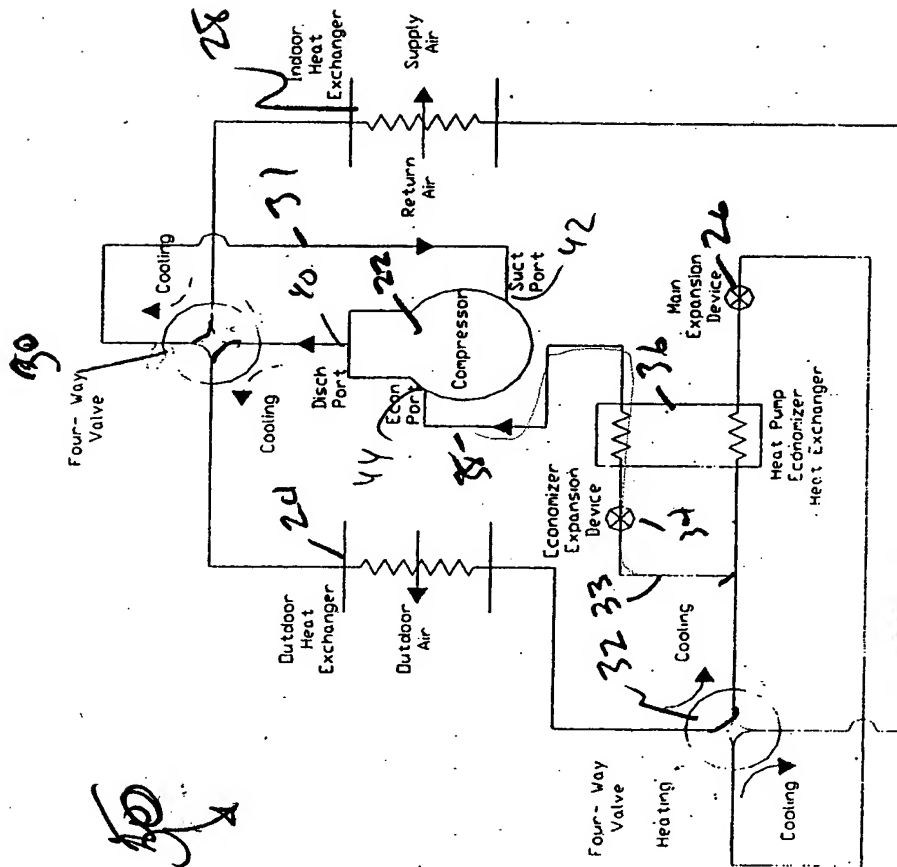


## Applicant: Lifson; Express Mail: EV221422013US

The diagram illustrates a two-stage heat pump system with a heat pump economizer. The refrigerant loop consists of a compressor (22) at the top, a condenser (30) on the right, and an evaporator (32) at the bottom. The system includes indoor and outdoor heat exchangers (24 and 34) and a four-way valve (20) for switching between heating and cooling modes. A heat pump economizer (36) is connected to the main expansion device (26) to provide additional cooling capacity. Arrows indicate the flow of refrigerant and air. Handwritten numbers 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, and 46 are placed near various components.

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DUAL REVERSING VALVES FOR ECONOMIZED HEAT PUMP  
Applicant: Lifson; Express Mail: EV221422013US



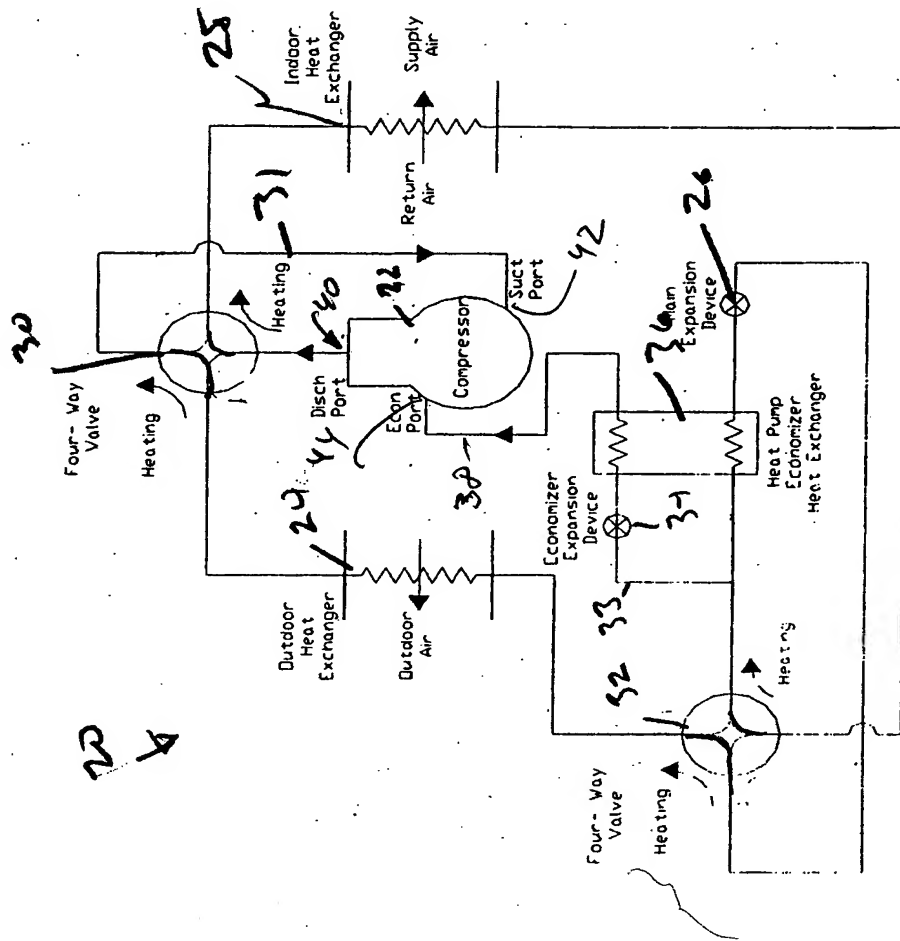


Fig 3